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THE BUSINESS OF COMMUNICATIONS

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# Networking

## MASTERS

### The Complete Referral

- Industry Analyses
- Segments Analyses
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- Top Distributors

### User Survey

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- Future Plans
- Purchase Trends
- Technology Perceptions
- Support Issues

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*Private FM Channels Interrupted?*



## NETWORK VENDORS

TOP 5

# 3 D-Link India

By far, D-Link is the volume king of the Indian networking industry.



**IDENTIFYING** demand and adapting itself to the ever-changing market scenario are the most characteristic trait of this company. From an obscure Taiwanese company to the top positions in 'Networking Masters', since the last two fiscals, D-Link's meteoric rise to the top defies traditional market wisdom. Sustaining its growth momentum, the company has once again managed to post an impressive 63 percent growth with networking revenues of Rs 240 crore for fiscal 2000-01. Thus making D-Link the No. 3 networking principal in India. D-Link has also crossed some important landmarks during the last fiscal, coming out with an IPO, forging a distribution alliance with Clarent for IP telephony solutions, and kickstarting its R&D efforts at Bangalore, being some of them. Moreover, its third plant at Goa is expected to go online this month.

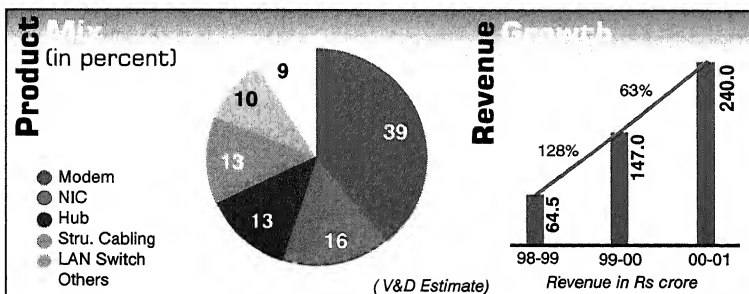
Most of D-Link's orders come from SIs—thus making

D-Link a visible brand. On the other hand, its well-tested and huge channel network made D-Link's products reach the farthest of India's geographical corners.

To the credit of D-Link, its units sold figures are a source of inspiration to anybody analyzing India's purchasing power. Analyzing the contrasting figures, the extent of parity can be seen. Fifty thousand units of hubs but only Rs 32 crore; 11,000 of switch units but just Rs 23 crore; etc. Falling prices evidently were the culprit. Despite being a late entrant into the structured cabling market, D-Link gained a strong foothold by posting a 100 percent growth, with revenue of Rs 30 crore. The ma-

### FACTSHEET

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**Head, Networking Division:** P Vyas  
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**Tel:** 022-6526696/6902210  
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**Total Network Revenue:** Rs 240 crore (V&D Estimate)



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## NETWORK VENDORS

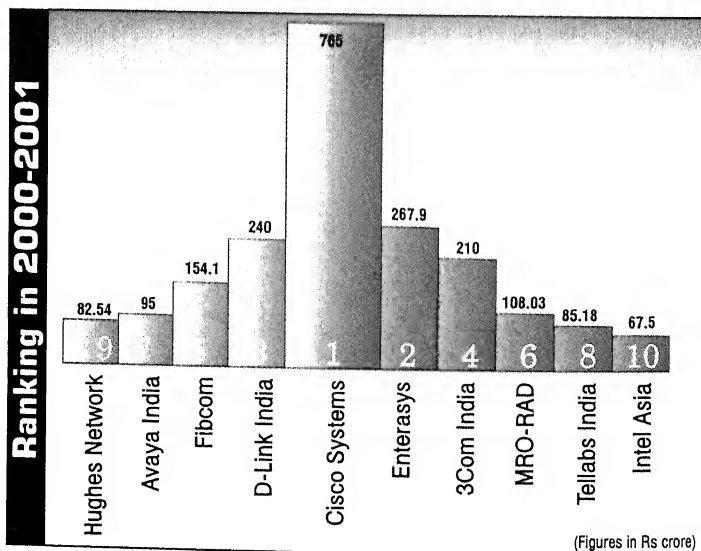
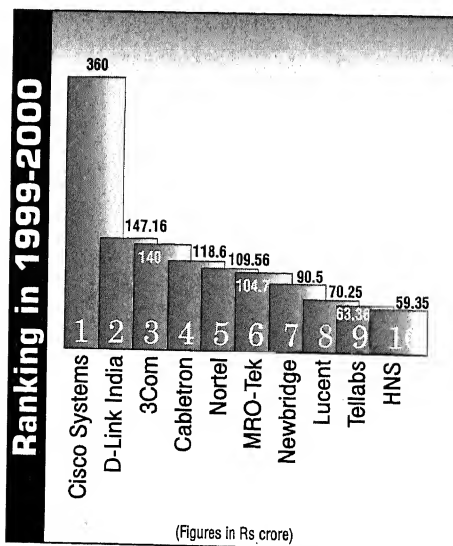
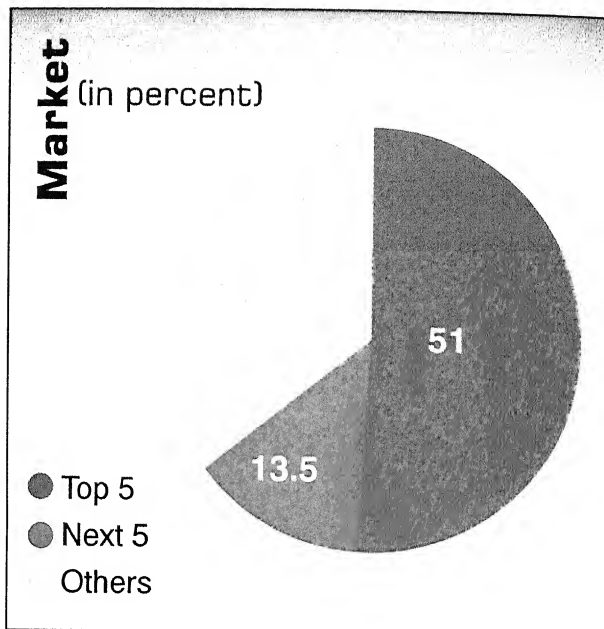
TOP 5

### NETWORK VENDORS

## Top 5

**C**isco is a clear winner being the top networking vendor in 2000-01 and is way ahead in comparison to Enterasys, which is the No. 2 vendor. Enterasys has done exceptionally well. D-Link too grew impressively posting a growth of 63 percent over the last fiscal. Though 3Com gained on the revenue front, the company slipped down to No. 4. Fibcom is a new entrant in the Top 10 Club, as this time 'Networking Masters' has included optical transmission as one of the components.

Last year was a three-digit growth year. But this year the market has not performed well and the average growth of companies in the Top 10 Club is about 66 percent. Avaya and Tellabs have stepped down on the rank list, while Hughes Network has stepped up. The revenue of 'Top 5' and 'Next 5' have reduced whereas that of the 'Others Category' has increased, showing that the number of players have increased in all the segments.



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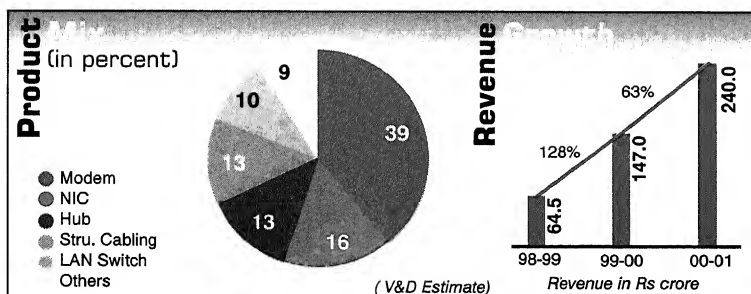
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hammers and tongs. IP telephony and wireless datacom products were the ones that it forayed into last year. This year, we can see more coming.

Success for D-Link, in the future, will lie in balancing its mass business with strides in new segments.

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## SEGMENT ANALYSIS

# NIC

**T**he total market for NICs is estimated to be Rs 82.94 crore in 2000-01. The market declined by about 11 percent from the previous years' sales. This was on account of slackening sales of NICs in the last two quarters of the fiscal. The year 2000-01 ended with sales of an estimated 1,048,000 NIC units, compared to last year's 1,098,000. The average price of an Ethernet NIC, which forms the bulk of NICs sales, remained for Rs 500.

The clear leader was D-Link who sold 380,000 units with total revenue of Rs 39 crore and an overall market share of 47 percent. But, the players that made a mark during last year were Intel and Dax. Intel cut into the other's market share gaining more than 4 percent to end the year with 15 percent of the market. And, Dax came out

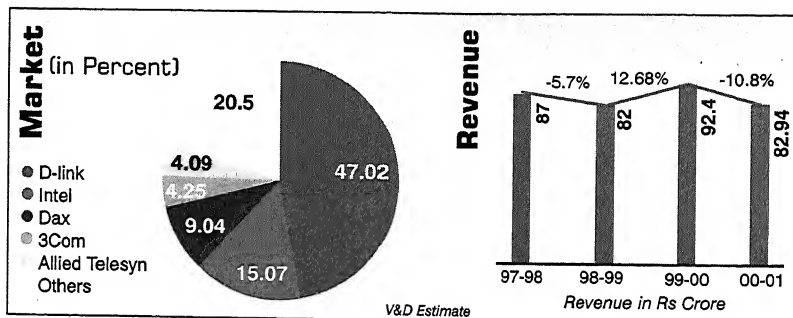
of the blue to capture 9 percent of the market. While all this was happening, 3Com decided to move away from the mass-market range of products to focus on manageability and feature-rich range. A battle between Intel and 3Com raged in this high range Fast Ethernet/Gigabit Ethernet NIC market, where the average price of a card was over Rs 2,500.

The other visible players in this mar-

### Top 5 Brands

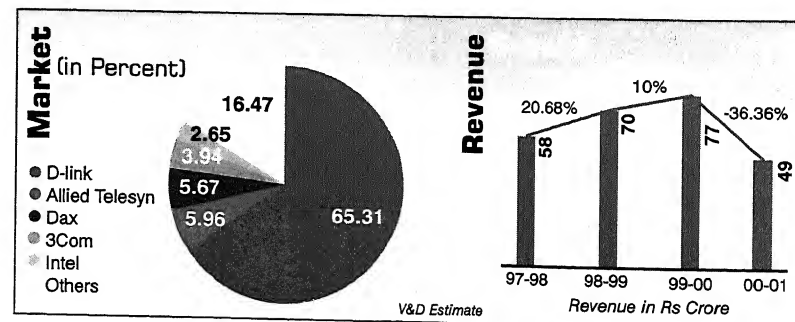
(Rs crore)	
Brands	Revenue
D-Link	39.0
Intel	12.5
Dax	7.5
3Com	3.5
Allied Telesyn	3.4
Others	17.0
<b>Total</b>	<b>82.9</b>

ket were Allied Telesyn, Accton and Linksys.



# Hubs

**T**he total market for hubs, today, stands just above Rs 49 crore in 2000-01. The overall sales revenue dropped as against that in the previous year by about 35 percent. This is primarily because the segment has witnessed two distinct trends. First, switches penetrating into the hubs market. Second, it has become an off-the-shelf product line. This market typically saw growth in mostly unmanaged hubs, as the managed hub users have moved on to use switches. The market, also clearly, saw a shift towards the 10/100 Mbps. In fact, Intel, Allied and Accton have been very active in this space. The average sales value per unit was around at Rs 5,000 for the unmanaged segment. And a total of over 14.5 lakh ports of hubs were

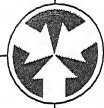


sold during the last fiscal.

The top five players in this category are D-Link, Allied Telesyn, Dax, 3Com and Intel. D-Link, clearly is the brand that is selling the most. It has almost 65.31 percent market share in the category and is the king of the market. And, its competition would come from the likes of Dax and Linksys in this space, as 3Com and Intel have moved to the higher end of the market.

### Top 5 Brands

(Rs crore)	
Brands	Revenue
D-Link	32.00
Allied Telesyn	2.92
Dax	2.78
3Com	1.93
Intel	1.30
Others	8.07
<b>Total</b>	<b>49.00</b>



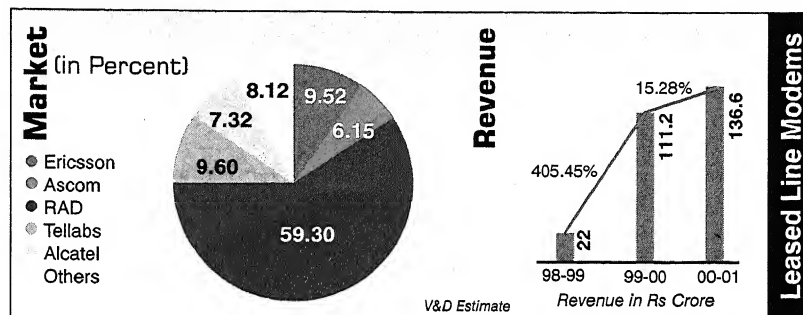
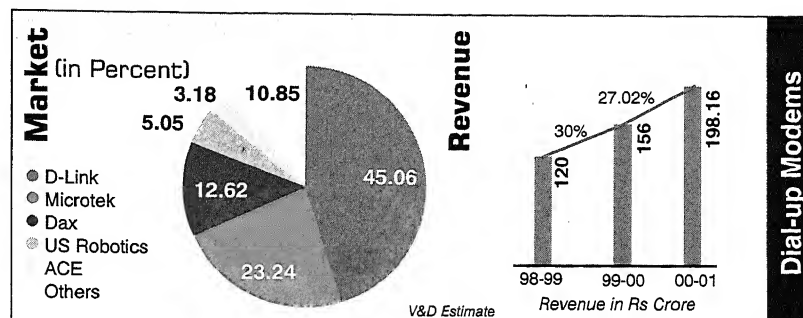
## SEGMENT ANALYSIS

# Modem

It has been the year of the two 'Teks' in the industry—MRO-Tek and Microtek. While the first one continued to hold its sway in the leased line category, Microtek came from nowhere to reach the No. 2 position in the dial-up category. The dial-up modems market was Rs 198.16 crore and the digital modems market was Rs 128.20 crore. The broadband market, too, took off on both the cable and ADSL front. 3Com has done very well in this space in which the other vendors include CI, Com21, Terayon, Katherein and Scientific Atlanta. And, new distributors like Capital Technologies, etc. started to enter the market. However, for our analysis, this year, we are considering only the top two product categories for want of adequate data on the broadband modem space.

The FY 2000-01 has been the year of consolidation in the modems market in the dial-up segment. The squeezing margins in this volume segment and easy availability across the counter positioning led to a few of them moving away from that business. For example, PowerTel Bocca, which used to carry the Bocca range of products got out of the business to become Citrix. This range, today, is being carried by Convergent Communications. Similarly, Priya International, which carried GVC, also distanced away. In the process, D-Link consolidated its market share, and Dax and Microtek emerged as strong brands in the South and North respectively. Bangalore-based Select Technologies entered the market with ACE brand of products. The trend clearly was that of the volumes' king, D-Link, by its pure reach and collective portfolio of networking products, held its ground strongly, and new and young distributors through their sheer energy carved out a space for themselves.

The exploding Internet growth, which has a direct influence on the modem sales, fuelled a very strong growth in volume, but saw stiff reduction on the



per unit price. As a result, the total dial-up modems sold in the country were over 9.7 lakh and with sales revenue touching Rs 198.16 crore. The external modems (56 Kbps) were available at a low rate of Rs 2,700 and 33.6 Kbps ones at a price of Rs 2,000. The internal modems were about Rs 700. And the prime reason for the fall in the prices has not just been because of competition. But almost all the players who distributed the modems had manufacturing units in the country and have looked at value-

that was left over last year by the departure of Powertel Bocca and Priya, but also captured a significant market share of over 24 percent with total revenue of Rs 46.05 crore. This has been possible due to two reasons, first, its strong distribution network and second, the customer has found it easier to relate to its monitor brand image and extend it to the Internet connectivity. This year could be a real battlefield for each of these players, as each one of the top five has carved out a niche for itself, and enter-

Top 5 Brands (Dial-up Modems)	
Brands	(Rs crore)
Sales Revenue	
D-Link	89.30
Microtek	46.05
Dax	25.00
US Robotics	10.00
ACE	6.30
Others	21.51
<b>Total</b>	<b>198.16</b>

Top 5 Brands (Leased Line Modems)	
Brands	(Rs crore)
Sales Revenue	
Ericsson	111.2
Ascom	136.6
RAD	136.6
Tellabs	136.6
Alcatel	136.6
Others	136.6

additions to make it suit to the Indian environment. There are also a few original product manufacturers like Hyderabad-based Team Engineers, which does its own branded products.

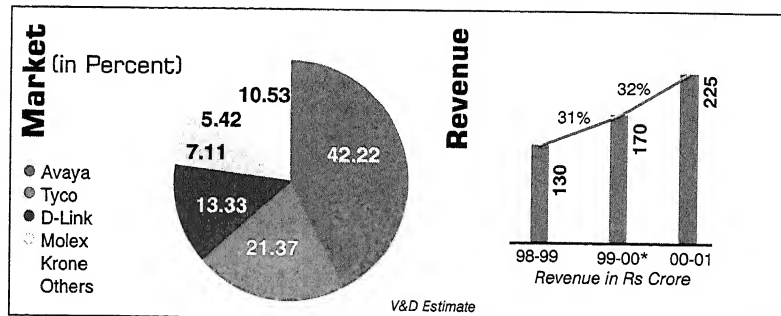
The real star performer this year has been Microtek. It not only filled the gap



# Structured Cabling

**T**he premises cabling market grew over 30 percent, on account of hectic buying in the IT, banking and finance, and government sectors. We estimate the total size of the structured cabling market at manufacturers sales to be Rs 225 crore for the passing fiscal. Further, like in the previous fiscal, there was an increased activity in the reseller market.

In fact, all the players, who have been in the market, have consolidated their base and increased their presence. While there were no new entrants in the scene, we saw Finolex entering the market aggressively through a MoU with Leviton. The two most dominant players in the industry still remain Avaya (the spin-off of Lucent, which today has the structured cabling business); and Tyco (formerly AMP) with total sales revenue of Rs 95 crore and Rs 48 crore respectively. The two jointly accounted for over 60 percent of the total market. Though Avaya continues to have the largest market share and revenue, integrators and distributors all feel that Tyco enjoyed the topnotch mindshare. The others who enjoyed the top-of-the-mind recall in projects include Panduit, Krone and Molex. While for Lucent and Tyco, the visibility was very high on account of their total solutions product portfolio, Panduit found its place because of its cable manager solutions.



retailer network, did Rs 30 crore of sales. Krone, Molex, and TVS Net too consolidated their hold on the market after the global restructuring. In a market dominated by Avaya and Lucent, the above mentioned players discovered new avenues in the sub-250 node networks and the upcountry markets.

Interestingly, all players have looked at adding more distributors and tying up with more integrators on one hand, while on the other, they looked at training and certification. Molex for example, has added two national distributors, Krone entered into partnership with ITI and Nebula, Deltafull and Duratube added more distributors, etc. In other words, the principals clearly found out that the integrators are no more aligned with a single vendor. The SIs provide anything that the customer demands.

Among the solutions, Enhanced Cat5 solutions have been the choice for mid and upper segments of the market. It has settled on Cat6 solutions, and software seg-

Top 5 Brands	
Brands	(Rs crore)
Sales Revenue	
Avaya	95.0
Tyco Electronics	48.1
D-Link	30.0
Molex	16.0
Krone Communications	12.2
Others	23.7
<b>Total</b>	<b>225.0</b>

ments. As far as fiber is concerned, 50/125-multimode fiber and composite fiber cables found acceptance in the market. Like the previous year, the biggest buyers have been software development centers, government, manufacturing, and banking and financing sectors. Tyco, for example, grew by 180 percent in the IT sector. Similarly, all the others have also seen this as a key sector. This year, however, we could see the IT sector spending coming down to about 40 percent, due to the US economy sneeze effect. However, the government sector spending is likely to race ahead.

*Continued from page 5*

grown exponentially. In 1999-00, the sales soared dizzily due to the steep cut in cost of leased lines, and it was estimated that sales in the period under review would race ahead. But unfortunately, due to delay in the ISP sector and telcos to go ahead with their projects, this segment had its tale of woes. Further, delay in the availability

of Cisco routers, too, choked the situation. Because of these two factors the digital modems sales grew by 22 percent only with estimated revenue of Rs 136.6 crore. The total number of units sold during the last fiscal was 34,188. Like the previous year, FY 2000-01 too, belonged to MRO-Tek. It did a total sale of 25,000 units and a business of Rs 81 crore.

The bulk of the sales has primarily

come on account of the 64 Kbps products. However, this year, the DSL modem sales too grew sharply. Tellabs and Ericsson, were the real major players. While Tellabs continued with its consistent performance and perseverance, Alcatel, Ascom and Ericsson gained on account of a few key wins from service providers and ISPs. Among the distributors, MRO-Tek and Convergent were the well-known names.

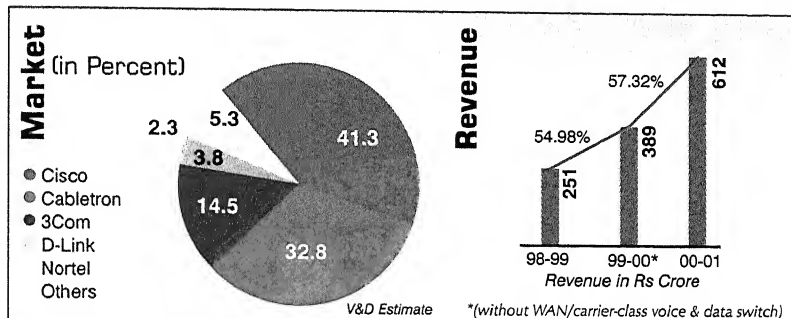


## SEGMENT ANALYSIS

# LAN Switches

In the previous fiscal, LAN switches posted a healthy 57 percent growth over 1999-00, to register a total sales revenue of Rs 612 crore. The total number of switches sold during the year was 55,204 units. Growth came from almost all the industrial sectors, however there were two new exciting areas of action last year—call center segment and the Internet Data Center (IDC) segment. The call center segment was where large switch sales of Rs 1 crore happened, the major buyers being Flex, Ansals, Sitel, Spectramind, Air Infotech and Himalaya T Commerce, among others. The IDC segment also came up with orders worth Rs 50 lakh to Rs 1.5 crore. Layer 3 switches comprised the major chunk of what was bought, but Layer 4-7 switches also made their mark in this segment. The active IDCs, last year, were VSNL, Satyam, Cyquator, Netmagic, Enron, Max India, Global Telesystems and Innodata.

The traditional switch buyers from banking & finance, manufacturing, transport/utility, and educational institutions continued to contribute in a quiet but significant manner. Banking and financial institutions executed the largest LANs in India, last year. To name a few, the big ones were BSE, EDRBT, RBI, Andhra Bank and NSE. Banks like ICICI, UTI, IDBI and Central Bank of India established their own data centers. The manufacturing sector saw large LANs being deployed by ACC, IOCL, BPCL, Carrier Aircon, Nestle, Cochin Refineries, Goodlass Nerolac, EIL and Kerala Rubber Board, among others. The IT sector, also lived up to expectations from the switch sector in spite of the global tech climb down. And, the educational institutions and transport/utility companies also contributed their share.



Last year, the switch market developed into multiple distinct categories. On one end, there were stackable and standalone 10/100 Mbps switches with different configurations of 8 ports, 12 ports, 16 ports and 24 ports. It was in this category that 3Com, the third largest switch market shareholder, in this year's analysis, dominated the market. Its competitors were Intel, Cisco and D-Link. An average 16-port non-stackable model in this segment was

as the winner this time, thus enabling it to lead in the overall LAN switch analysis as well—Cisco ending the year with 41 percent market share and Enterasys with 32 percent. Cisco's product range clinched the overall leadership for it, though Enterasys performed better in the high-end layer 3 switch category. The average price of a chassis-based Gigabit model stood at about Rs 30 lakh. The entry of Extreme and Foundry did not make much difference, as these brands, clearly, lacked NI representatives.

An interesting part of the switch drama during the last fiscal, however, was the entry of Layer 4-7 switch players in the market. Here, NetScout with its acquired Alteon products dominated the market. f5 also managed to create a two.

This year, the switch segment is in for better times, as banks are expected to scramble up data as part of an RBI directive to consolidate their IT resources despite the global tech slowdown. The beginning of this year has already seen announcements by global tech giants like Lucent, HP and Intel to recruit local developers. These good signs like the encouraging budget could place the segment to overdrive, in the fiscal.

Top 5 Brands	
(Rs crore)	
Brands	Sales Revenue
Cisco	253.00
Cabletron	200.90
3Com	88.90
D-Link	23.00
Nortel	14.21
Others	32.10
<b>Total</b>	<b>612.11</b>

at about Rs 15,000 per unit, with per port price of about Rs 900. The stackable switches were much more costly at about Rs 50,000 a unit on per port price of Rs 4,000.

Then there was the high-end chassis-based Layer 3 switch category where the royal battle raged between the biggies of this year's Networking Masters, Cisco and Enterasys. The battle was tough, but Cisco emerged